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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,759	10/20/2003	Yu-Cheng Chen	4006-270	9603
22429	7590	08/23/2005	EXAMINER	
LOWE HAUPTMAN GILMAN AND BERNER, LLP 1700 DIAGONAL ROAD SUITE 300 /310 ALEXANDRIA, VA 22314			NGUYEN, THANH NHAN P	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/687,759	<b>Applicant(s)</b> CHEN ET AL.	
	<b>Examiner</b> (Nancy) Thanh-Nhan P. Nguyen	<b>Art Unit</b> 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 12-30 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 12-30 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

This communication is responsive to Amended dated 6/02/2005.

Claims 1-11 have been cancelled; new claims 12-30 have been added.

Claims 12-30 are pending for the examination.

### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 12, 17-19, and 24-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Chartier U.S. Patent No. 4,938,567.**

Referring to claim 19, Chartier discloses a matrix structure of a display, comprising:

a substrate (1); and

a plurality of pixel (PX) units arranged in a matrix on the substrate, each of the pixel units being disposed near an intersection of a gate line extending in a first direction and a data line extending in a second direction orthogonal to the first direction,

wherein the gate line includes:

a first main line (LG) formed in a first conductive layer; and

a plurality of first branch lines (lg1) formed in a second conductive layer spaced apart from the first conductive layer, each of the first branch lines having a first length and being separated from an adjacent first branch line by a first distance; and the data line includes:

a second main line (CL) formed in the second conductive layer; and

a plurality of second branch lines (col1, col2) formed in the first conductive layer, each of the second branch lines having a second length and being separated from each adjacent second branch line by a second distance, [figs. 2-4, and 12];  
and

wherein one of a first ratio of the first length to the first distance or a second ratio of the second length to the second distance is predetermined in order to reduce the resistance of the matrix structure of the display inherently since the resistance is inversely proportional to the area.

Referring to claim 24, Chartier discloses the matrix structure of the display further comprising a plurality of contact plugs (CX3) for connecting the first branch lines to the first main line, [fig. 12].

Referring to claim 25, Chartier discloses the matrix structure of the display further comprising a plurality of contact plugs (CX4, CX5) for connecting the second branch lines to the second main line, [fig. 12].

Claim 12 is met the discussion regarding claim 19 rejection above.

Claim 17 is met the discussion regarding claims 12 and 24 rejection above.

Claim 18 is met the discussion regarding claims 12 and 25 rejection above.

Claim 26 is met the discussion regarding to claim 19 rejection above except having an additional limitation, which is forming an insulating layer on the patterned first conductive layer, [fig. 5 – element 2].

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 13-16, 20-23, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chartier in view of Irwin, Jr. et al U.S. Patent 6,491,215.**

Referring to claims 20-23, since the main idea is about the resistance inversely proportional to the area, as Irwin, Jr. et al discloses, [col. 27, lines 1-7], it does not matter about the limit of the value for the ratio of the length to the distance of the first or the second branch lines. Thus, the value for the ratio of the length to the distance of the first or the second branch lines really depends on how much resistance the designer/inventor wants to get out from the layer, and therefore, even though Chartier lacks disclosure of the first ratio or the second ratio is greater than approximately 2 or ranges between approximately 2 and 9, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to pick out the range 2 to 9 for the benefit of getting the resistance from the multilayer.

Claim 13 is met the discussion regarding claims 12 and 20 rejection above.

Claim 14 is met the discussion regarding claims 12 and 21 rejection above.

Claim 15 is met the discussion regarding claims 12 and 22 rejection above.

Claim 16 is met the discussion regarding claims 12 and 23 rejection above.

Claim 27 is met the discussion regarding claims 26 and 20 rejection above.

Claim 28 is met the discussion regarding claims 26 and 21 rejection above.

Claim 29 is met the discussion regarding claims 26 and 22 rejection above.

Claim 30 is met the discussion regarding claims 26 and 23 rejection above.

### **Response to Arguments**

Applicant's arguments with respect to claims 12-30 have been considered but are moot in view of the new ground(s) of rejection.

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

Art Unit: 2871

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on M-F/9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

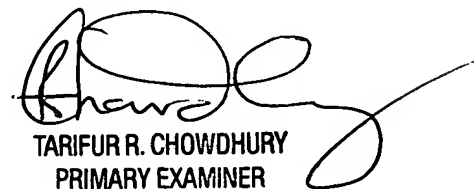
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

(Nancy) Thanh-Nhan P. Nguyen  
Examiner

Art Unit 2871

-- August 22, 2005 --

TN



TARIFUR R. CHOWDHURY  
PRIMARY EXAMINER